



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/738,447	12/16/2003	Thomas E. Wood	58323US004	8098

32692 7590 04/04/2006

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT PAPER NUMBER

3749

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/738,447

**Applicant(s)**

WOOD ET AL.

**Examiner**

Stephen Gravini

**Art Unit**

3749

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1-37 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-20, drawn to substrate drying, classified in class 34, subclass 77.
- II. Claims 21-37, drawn to a ceramic fiber composite, classified in class 501, subclass 95.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions of group I and group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the group I process as claimed can be practiced by another materially different apparatus or by hand because the independently claimed process is limited to the steps of impregnating, drying, calcining, and firing which are not limitations in the independently claimed apparatus.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant's election with traverse of group I claims 1-20 in the reply filed on March 2, 2006 is acknowledged. The traversal is on the grounds that group II claims do not relate to an apparatus for carrying out the process of group I. This is not found persuasive because the independently claimed group I invention represents an independent and distinct invention, as restricted above, and would represent a serious burden upon the Office to examiner both inventions because examination would require distinguishing each claimed feature among thousands of prior art references.

The requirement is still deemed proper and is therefore made FINAL.

This application is in condition for allowance except for the presence of claims 21-37 directed to an invention non-elected with traverse in the reply filed on March 9, 2006. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

***Allowable Subject Matter***

Claims 1-21 are allowed. The claimed invention comprising forming a green substrate from ceramic fibers, impregnating the substrate with a dispersion of water, nonclay, and a ceramic material or precursor thereof, drying, calcining, firing for a composite less than 65 percent porosity is not found in the prior art either singly or in combination. The most relevant prior art references are considered Nixdorf (US 6,913,059) which discloses drying a web bearing a ceramic binder but not the claimed calcining and firing calcined substrate and Xun (US 6,287,510) which discloses ceramic batch extrusion with a firing cycled green structure involving dried ceramics but not the claimed water, nonclay, and ceramic material or precursor thereof impregnated dispersion. Other prior art cited in this action contain one or more of the claimed elements but not whether a person of ordinary skill in the art, possessed with the understanding and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been lead to make the combination recited in the claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

Art Unit: 3749

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571 272 4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SMG  
March 23, 2006

A handwritten signature in black ink that reads "Stephen Gavin". The signature is written in a cursive, flowing style.